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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/668,374	09/24/2003	Byoung-han Kim	1293.1850	4793

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EXAMINER

DHARIA, PRABODH M

ART UNIT

PAPER NUMBER

2629

DATE MAILED: 05/01/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

**Application No.**

10/668,374

**Applicant(s)**

KIM, BYOUNG-HAN

**Examiner**

Prabodh M. Dharia

**Art Unit**

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 06 November 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-3,8-11,16-19 and 25-27 is/are rejected.
- 7) ☒ Claim(s) 4-7,12-15 and 20-24 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 06 November 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

***Priority***

1. Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

***Specification***

2. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.

3. The abstract of the disclosure is objected to because total count exceeds 150. Correction is required. See MPEP § 608.01(b).

***Claim Rejections - 35 USC § 103***

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claim1-3, 8-11,16-19 and 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tokui (5,987,532) in view of Kaneda et al. (6,864,921 B1).

Regarding Claim1, Tokui teaches a chained image display apparatus (U1-U4, figure 1-5, Col. 2, lines 52-67, Col. 3, Lines 33-36) comprising a plurality of image display apparatuses connected in series (figure 1, Col. 2, Lines 52-56, Col. 3, lines 33-36) and controlled by a central control unit (#5 Figure 1, Col. 2, Lines 59,60), the chained image display apparatus (U1-U4, figure 1, Col. 2, Lines 52-56) comprising: a control signal driving unit converting a control signal inputted to the image display apparatuses into a control signal having a predetermined level and buffering the control signal having the predetermined level (Col. 2, Lines 59-67).

However, Tokui fails to teach an examining unit transmitting an alert signal, in response to a power supply to one image display apparatus among the plurality of image display apparatuses being interrupted, to next and previous image display apparatuses which are connected to the one image display apparatus to which the power supply was interrupted, indicating that the power supply to the one image display apparatus is interrupted.

However, Kaneda et al. discloses an examining unit transmitting an alert signal, in response to a power supply to one image display apparatus among the plurality of image display apparatuses being interrupted figure 12, #101 Col. 10, Lines 48-50), to next and previous image display apparatuses which are connected to the one image display apparatus to which the power supply was interrupted, indicating that the power supply to the one image display apparatus is interrupted (Col. 10, Lines 45-52, figure 1, Col. 5, Lines 47-56, Since it has access to all the display panel it can display error message selectively).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Kaneda et al. in the teaching of Tokui to be able to have multi-panel display system capable of recognizing system data as error messages

such as power failure and be able to display power down message on selected panels.

Regarding Claim 2, Tokui teaches each of the plurality of image display apparatuses further comprises: a portion receiving the control signal from the central control unit; and a buffer transmitting the received control signal to the next image display apparatus (figure 1-4, Col. 2, Lines 52-67, Col. 3, Lines 1-7, 33-36).

Regarding Claim 3, Tokui fails to teach the next and previous image display apparatuses, receiving the alert signal output from the examining unit, transmit the alert signal to the central control unit.

However, Kaneda et al. discloses the next and previous image display apparatuses, receiving the alert signal output from the examining unit, transmit the alert signal to the central control unit (Col. 10, Lines 45-52, figure 1, Col. 5, Lines 47-56, Since it has access to all the display panel it can display error message selectively figure 2, figure 8 shows three si two way communication between central control unit and video processing unit.).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of in Kaneda et al. the teaching of Tokui to be able to have multi-panel display system capable of recognizing system data as error messages such as power failure and be able to display power down message on selected panels.

Regarding Claim 9, Tokui teaches the driving voltage output from the previous image display apparatus is provided to the next image display apparatus (Col. 3, Line 22 to Col. 4, Line

28).

Regarding Claim 10, Tokui teaches a method of operating a plurality of image display apparatuses connected in series and controlled by a central control unit, a chained image display apparatus (U1-U4, figure 1, Col. 2, Lines 52-56) comprising a plurality of image display apparatuses connected in series (figure 1, Col. 2, Lines 52-56, Col. 3, lines 33-36) and controlled by a central control unit (#5 Figure 1, Col. 2, Lines 59,60), the chained image display apparatus (U1-U4, figure 1, Col. 2, Lines 52-56) comprising: a control signal driving unit converting a control signal inputted to the image display apparatuses into a control signal having a predetermined level and buffering the control signal having the predetermined level (Col. 2, Lines 59-67).

However, Tokui fails to teach an examining unit transmitting an alert signal, in response to a power supply to one image display apparatus among the plurality of image display apparatuses being interrupted, to next and previous image display apparatuses which are connected to the one image display apparatus to which the power supply was interrupted, indicating that the power supply to the one image display apparatus is interrupted.

However, Kaneda et al. discloses an examining unit transmitting an alert signal, in response to a power supply to one image display apparatus among the plurality of image display apparatuses being interrupted figure 12, #101 Col. 10, Lines 48-50), to next and previous image display apparatuses which are connected to the one image display apparatus to which the power supply was interrupted, indicating that the power supply to the one image display apparatus is

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interrupted (Col. 10, Lines 45-52, figure 1, Col. 5, Lines 47-56, Since it has access to all the display panel it can display error message selectively).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Kaneda et al. in the teaching of Tokui to be able to have multi-panel display system capable of recognizing system data as error messages such as power failure and be able to display power down message on selected panels.

Regarding Claim 11, Tokui fails to teach the next and previous image display apparatuses, receiving the alert signal output from the examining unit, transmit the alert signal to the central control unit.

However, Kaneda et al. discloses the next and previous image display apparatuses, receiving the alert signal output from the examining unit, transmit the alert signal to the central control unit (Col. 10, Lines 45-52, figure 1, Col. 5, Lines 47-56, Since it has access to all the display panel it can display error message selectively figure 2, figure 8 shows three is two way communication between central control unit and video processing unit.).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of in Kaneda et al. the teaching of Tokui to be able to have multi-panel display system capable of recognizing system data as error messages such as power failure and be able to display power down message on selected panels.

Regarding Claim 15, Kaneda et al. teaches the control unit sends the alert signal to the examining unit (figures 2,8, Col. 9, Lines 31-35, Col. 10, Lines 45-52, figure 1, Col. 5, Lines 47-

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56, Since it has access to all the display panel it can display error message selectively figure 2, figure 8 shows three is two way communication between central control unit and video processing unit the selects the alert signal to be displayed on selective displays).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of in Kaneda et al. the teaching of Tokui to be able to have multi-panel display system capable of recognizing system data as error messages such as power failure and be able to display power down message on selected (software or hardware switches) panels.

Regarding Claim 16, Tokui teaches the connection unit connects a driving voltage output from the previous image display apparatus to the one image display apparatus and transmits an image signal, which is buffered by the one image display apparatus to the next image display apparatus (Col. 3, Line 22 to Col. 4, Line 28).

However, Tokui fails to disclose the power supply was interrupted and a switching unit routing the alert signal to the next and previous image display apparatuses in response to the power supply being interrupted.

However, Kaneda et al. the power supply was interrupted and a switching unit routing the alert signal to the next and previous image display apparatuses in response to the power supply being interrupted (Col. 10, Lines 45-52, figure 1, Col. 5, Lines 47-56, Since it has access to all the display panel it can display error message selectively figure 2, figure 8 shows three is two way communication between central control unit and video processing unit.).



Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of in Kaneda et al. the teaching of Tokui to be able to have multi-panel display system capable of recognizing system data as error messages such as power failure and be able to display power down message on selected panels.

Regarding Claim 17, Tokui teaches the driving voltage output from the previous image display apparatus is provided to the next image display apparatus (Col. 3, Line 22 to Col. 4, Line 28).

Regarding Claim 18, Tokui teaches a plurality of image display apparatuses connected in series and controlled by a central control unit, a chained image display apparatus (U1-U4, figure 1, Col. 2, Lines 52-56) comprising a control signal driving unit converting a control signal inputted to the image display apparatuses into a control signal having a predetermined level and buffering the control signal having the predetermined level (Col. 3, Line 22 to Col. 4, Line 28); a plurality of image display apparatuses connected in series (figure 1, Col. 2, Lines 52-56, Col. 3, lines 33-36) and controlled by a central control unit (#5 Figure 1, Col. 2, Lines 59,60), the chained image display apparatus (U1-U4, figure 1, Col. 2, Lines 52-56) comprising: a control signal driving unit converting a control signal inputted to the image display apparatuses into a control signal having a predetermined level and buffering the control signal having the predetermined level (Col. 2, Lines 59-67).

However, Tokui fails to teach an examining unit transmitting an alert signal, in response to a power supply to one image display apparatus among the plurality of image display

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apparatuses being interrupted, to next and previous image display apparatuses which are connected to the one image display apparatus to which the power supply was interrupted, indicating that the power supply to the one image display apparatus is interrupted.

However, Kaneda et al. discloses an examining unit transmitting an alert signal, in response to a power supply to one image display apparatus among the plurality of image display apparatuses being interrupted figure 12, #101 Col. 10, Lines 48-50), to next and previous image display apparatuses which are connected to the one image display apparatus to which the power supply was interrupted, indicating that the power supply to the one image display apparatus is interrupted (Col. 10, Lines 45-52, figure 1, Col. 5, Lines 47-56, Since it has access to all the display panel it can display error message selectively).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Kaneda et al. in the teaching of Tokui to be able to have multi-panel display system capable of recognizing system data as error messages such as power failure and be able to display power down message on selected panels.

Regarding Claim 19, Tokui teaches each of the plurality of image display apparatuses further comprises: a portion receiving the control signal from the central control unit; and a buffer transmitting the received control signal to the next image display apparatus (Col. 3, Line 22 to Col. 4, Line 28).

Regarding Claim 25, Tokui teaches the connection unit connects a driving voltage output from the previous image display apparatus to the one image display apparatus and transmits an

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image signal, which is buffered by the one image display apparatus to the next image display apparatus (Col. 3, Line 22 to Col. 4, Line 28).

However, Tokui fails to disclose the power supply was interrupted and a switching unit routing the alert signal to the next and previous image display apparatuses in response to the power supply being interrupted.

However, Kaneda et al. the power supply was interrupted and a switching unit routing the alert signal to the next and previous image display apparatuses in response to the power supply being interrupted (Col. 10, Lines 45-52, figure 1, Col. 5, Lines 47-56, Since it has access to all the display panel it can display error message selectively figure 2, figure 8 shows three is two way communication between central control unit and video processing unit.).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of in Kaneda et al. the teaching of Tokui to be able to have multi-panel display system capable of recognizing system data as error messages such as power failure and be able to display power down message on selected panels.

Regarding Claim 26, Tokui teaches the driving voltage output from the previous image display apparatus is provided to the next image display apparatus (Col. 3, Line 22 to Col. 4, Line 28).

Regarding Claim 27, Tokui teaches a machine readable storage medium storing a program (figure 1, Col. 2, Lines 52-55 a computer is a machine readable storage (memory) medium stores program to be executed) for performing a method of operating a plurality of

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image display apparatuses connected in series and controlled by a central control unit, a chained image display apparatus (U1-U4, figure 1, Col. 2, Lines 52-56) comprising a control signal driving unit converting a control signal inputted to the image display apparatuses into a control signal having a predetermined level and buffering the control signal having the predetermined level (Col. 3, Line 22 to Col. 4, Line 28); a plurality of image display apparatuses connected in series (figure 1, Col. 2, Lines 52-56, Col. 3, lines 33-36) and controlled by a central control unit (#5 Figure 1, Col. 2, Lines 59,60), the chained image display apparatus (U1-U4, figure 1, Col. 2, Lines 52-56) comprising: a control signal driving unit converting a control signal inputted to the image display apparatuses into a control signal having a predetermined level and buffering the control signal having the predetermined level (Col. 2, Lines 59-67).

However, Tokui fails to teach an examining unit transmitting an alert signal, in response to a power supply to one image display apparatus among the plurality of image display apparatuses being interrupted, to next and previous image display apparatuses which are connected to the one image display apparatus to which the power supply was interrupted, indicating that the power supply to the one image display apparatus is interrupted.

However, Kaneda et al. discloses an examining unit transmitting an alert signal, in response to a power supply to one image display apparatus among the plurality of image display apparatuses being interrupted figure 12, #101 Col. 10, Lines 48-50), to next and previous image display apparatuses which are connected to the one image display apparatus to which the power supply was interrupted, indicating that the power supply to the one image display apparatus is interrupted (Col. 10, Lines 45-52, figure 1, Col. 5, Lines 47-56, Since it has access to all the display panel it can display error message selectively).

Thus it would have been obvious to one in the ordinary skill in the art at the time of invention was made to incorporate the teaching of Kaneda et al. in the teaching of Tokui to be able to have multi-panel display system capable of recognizing system data as error messages such as power failure and be able to display power down message on selected panels.

*Allowable Subject Matter*

6. Claims 4-7, 12-15 and 20-24 objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

7. The following is an examiner's statement of reasons for allowance:

A chained image display apparatus comprising a plurality of image display apparatuses connected in series and controlled by a central control unit, the chained image display apparatus comprising: a control signal driving unit converting a control signal inputted to the image display apparatuses into a control signal having a predetermined level and buffering the control signal having the predetermined level; and an examining unit transmitting an alert signal, in response to a power supply to one image display apparatus among the plurality of image display apparatuses being interrupted, to next and previous image display apparatuses which are connected to the one image display apparatus to which the power supply was interrupted, indicating that the power supply to the one image display apparatus is interrupted and **a connection unit receiving a voltage from the previous image display apparatus and supplying a supply voltage to the one image display apparatus to which the power supply was interrupted; and a switching**

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**unit routing the alert signal to the next and previous image display apparatuses in response to the power supply being interrupted; wherein the switching unit comprises a first switching unit routing the alert signal to the previous image display apparatus, and a second switching unit routing the alert signal to the next image display apparatus and a control unit, wherein the control unit outputs a switching control signal controlling the first and second switching units; the control unit sends the alert signal to the examining unit.**

The cited references on the 8982's fail to recite or disclosed above underlined claim.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Suga et al. (4,800,376) Multiple display system.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Prabodh M. Dharia whose telephone number is 571-272-7668.

The examiner can normally be reached on M-F 8AM to 5PM.

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10. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

11. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Any response to this action should be mailed to:


Commissioner of Patents and Trademarks

Washington, D.C. 20231

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April 27, 2006

  
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